

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	RWF 31-34	Wellbore No.	
Well Name	RWF 31-34	Common Name	RWF 31-34
Project	RU 27-06S-094W	Site	RMV 28-27 Pad
Vertical Section Azimuth	205.21 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	6/24/2012	UWI	RWF 31-34
Active Datum	KB @5,323.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	6/24/2012	Ended	
Tool Name	MWD	Engineer	

#### 2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0.0	0.00	0.00	0.00	0.00	0.00

#### 2.1.2 Survey Stations

5332

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/24/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/24/2012	NORMAL	73.0	0.79	257.87	73.00	-0.11	-0.49	0.31	1.08	1.08	0.00	257.87
	NORMAL	164.0	1.67	226.85	163.98	-1.14	-2.07	1.92	1.18	0.97	-34.09	306.69
	NORMAL	255.0	2.73	203.03	254.91	-4.05	-3.89	5.32	1.51	1.16	-26.18	306.90
	NORMAL	346.0	5.19	195.12	345.69	-10.01	-5.81	11.54	2.76	2.70	-8.69	343.51
	NORMAL	436.0	7.48	202.68	435.13	-19.35	-9.13	21.40	2.70	2.54	8.40	23.80
	NORMAL	511.0	8.18	201.94	509.43	-28.80	-13.01	31.60	0.94	0.93	-0.99	351.44
	NORMAL	603.0	9.06	199.65	600.39	-41.70	-17.89	45.35	1.03	0.96	-2.49	337.56
	NORMAL	694.0	9.41	203.87	690.21	-55.25	-23.31	59.91	0.84	0.38	4.64	64.76
	NORMAL	784.0	9.67	208.26	778.97	-68.63	-29.86	74.82	0.86	0.29	4.88	72.51
	NORMAL	875.0	9.76	206.86	868.67	-82.25	-36.97	90.16	0.28	0.10	-1.54	290.16
	NORMAL	966.0	9.59	207.21	958.37	-95.87	-43.92	105.44	0.20	-0.19	0.38	161.09
	NORMAL	1,062.0	8.88	208.26	1,053.13	-109.51	-51.08	120.84	0.76	-0.74	1.09	167.17
	NORMAL	1,115.0	9.32	205.98	1,105.46	-116.97	-54.90	129.21	1.07	0.83	-4.30	319.53
6/26/2012	NORMAL	1,205.0	9.32	205.63	1,194.27	-130.09	-61.25	143.79	0.06	0.00	-0.39	269.83
	NORMAL	1,270.0	9.67	203.34	1,258.38	-139.85	-65.68	154.51	0.79	0.54	-3.52	311.68
	NORMAL	1,365.0	9.23	206.16	1,352.09	-154.01	-72.20	170.10	0.67	-0.46	2.97	134.93
	NORMAL	1,461.0	9.59	207.39	1,446.80	-168.02	-79.28	185.79	0.43	0.38	1.28	29.80
	NORMAL	1,557.0	9.32	203.87	1,541.50	-182.23	-86.10	201.55	0.66	-0.28	-3.67	243.24
	NORMAL	1,652.0	9.50	202.29	1,635.22	-196.52	-92.19	217.07	0.33	0.19	-1.66	304.09
	NORMAL	1,748.0	9.14	200.71	1,729.95	-210.98	-97.89	232.58	0.46	-0.38	-1.65	214.63

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (%/100ft)	Build Rate (%/100ft)	Turn (%/100ft)	TFace (°)
6/26/2012	NORMAL	1,843.0	8.09	205.81	1,823.88	-224.06	-103.47	246.79	1.37	-1.11	5.37	146.46
	NORMAL	1,938.0	8.00	204.05	1,917.94	-236.11	-109.07	260.08	0.28	-0.09	-1.85	249.06
	NORMAL	2,034.0	7.91	204.40	2,013.02	-248.23	-114.53	273.37	0.11	-0.09	0.36	151.88
	NORMAL	2,129.0	8.35	201.94	2,107.07	-260.58	-119.80	286.79	0.59	0.46	-2.59	320.45
	NORMAL	2,225.0	8.09	207.74	2,202.08	-273.03	-125.55	300.50	0.90	-0.27	6.04	110.26
	NORMAL	2,321.0	8.35	206.68	2,297.10	-285.23	-131.83	314.22	0.31	0.27	-1.10	329.24
	NORMAL	2,416.0	8.71	205.45	2,391.04	-297.89	-138.01	328.30	0.42	0.38	-1.29	332.52
	NORMAL	2,510.0	8.97	205.28	2,483.93	-310.95	-144.20	342.75	0.28	0.28	-0.18	354.18
	NORMAL	2,606.0	8.97	203.69	2,578.75	-324.57	-150.40	357.71	0.26	0.00	-1.66	269.21
	NORMAL	2,702.0	8.71	205.28	2,673.61	-337.99	-156.52	372.47	0.37	-0.27	1.66	137.56
	NORMAL	2,797.0	8.18	204.40	2,767.58	-350.65	-162.38	386.42	0.57	-0.56	-0.93	193.27
	NORMAL	2,893.0	7.83	204.40	2,862.65	-362.83	-167.90	399.78	0.36	-0.36	0.00	180.00
	NORMAL	2,989.0	8.00	203.34	2,957.73	-374.91	-173.25	413.00	0.23	0.18	-1.10	318.82
	NORMAL	3,084.0	8.79	205.45	3,051.71	-387.54	-178.99	426.87	0.89	0.83	2.22	22.35
	NORMAL	3,180.0	9.59	208.44	3,146.48	-401.19	-185.95	442.18	0.97	0.83	3.11	32.32
	NORMAL	3,276.0	9.67	209.50	3,241.13	-415.24	-193.73	458.21	0.20	0.08	1.10	66.24
	NORMAL	3,371.0	9.50	205.63	3,334.80	-429.26	-201.05	474.00	0.70	-0.18	-4.07	253.32
	NORMAL	3,467.0	9.94	205.45	3,429.43	-443.88	-208.04	490.21	0.46	0.46	-0.19	355.96
	NORMAL	3,562.0	9.23	206.33	3,523.10	-458.11	-214.94	506.03	0.76	-0.75	0.93	168.77
	NORMAL	3,658.0	9.67	205.10	3,617.80	-472.31	-221.77	521.79	0.50	0.46	-1.28	334.74
	NORMAL	3,753.0	9.94	205.63	3,711.41	-486.93	-228.70	537.97	0.30	0.28	0.56	18.75
	NORMAL	3,849.0	8.62	204.40	3,806.15	-500.96	-235.26	553.45	1.39	-1.38	-1.28	187.94
	NORMAL	3,944.0	8.79	205.63	3,900.06	-513.98	-241.34	567.82	0.27	0.18	1.29	48.21
	NORMAL	4,039.0	8.97	198.95	3,993.92	-527.53	-246.89	582.44	1.10	0.19	-7.03	276.59
	NORMAL	4,135.0	8.00	207.21	4,088.87	-540.55	-252.37	596.56	1.62	-1.01	8.60	132.55
	NORMAL	4,231.0	7.30	207.40	4,184.02	-551.91	-258.23	609.33	0.73	-0.73	0.20	178.02
	NORMAL	4,327.0	6.33	203.69	4,279.34	-562.17	-263.17	620.72	1.11	-1.01	-3.86	202.58
	NORMAL	4,422.0	5.36	202.11	4,373.84	-571.08	-266.94	630.38	1.03	-1.02	-1.66	188.63
6/27/2012	NORMAL	4,517.0	5.10	200.71	4,468.45	-579.14	-270.10	639.02	0.30	-0.27	-1.47	205.45
	NORMAL	4,612.0	3.69	201.23	4,563.17	-585.94	-272.70	646.28	1.48	-1.48	0.55	178.64
	NORMAL	4,707.0	2.81	210.55	4,658.01	-590.79	-275.00	651.65	1.08	-0.93	9.81	153.61
	NORMAL	4,803.0	2.11	229.54	4,753.92	-593.97	-277.54	655.61	1.11	-0.73	19.78	139.88
	NORMAL	4,899.0	2.02	217.23	4,849.86	-596.46	-279.90	658.87	0.47	-0.09	-12.82	252.42
	NORMAL	4,994.0	1.32	220.75	4,944.82	-598.62	-281.63	661.56	0.74	-0.74	3.71	173.42
	NORMAL	5,089.0	0.53	205.81	5,039.81	-599.85	-282.54	663.06	0.86	-0.83	-15.73	189.60
	NORMAL	5,185.0	0.35	123.36	5,135.81	-600.41	-282.49	663.54	0.62	-0.19	-85.89	215.64
	NORMAL	5,280.0	0.79	160.98	5,230.80	-601.19	-282.03	664.05	0.58	0.46	39.60	60.24
	NORMAL	5,376.0	0.88	165.55	5,326.79	-602.53	-281.63	665.09	0.12	0.09	4.76	38.80
6/28/2012	NORMAL	5,471.0	0.62	160.98	5,421.78	-603.72	-281.28	666.02	0.28	-0.27	-4.81	190.68
	NORMAL	5,567.0	0.97	156.23	5,517.77	-604.95	-280.78	666.93	0.37	0.36	-4.95	346.96
	NORMAL	5,663.0	0.18	188.58	5,613.77	-605.85	-280.48	667.61	0.86	-0.82	33.70	173.28
	NORMAL	5,758.0	0.44	192.09	5,708.77	-606.35	-280.58	668.10	0.27	0.27	3.69	5.93
	NORMAL	5,854.0	0.53	192.80	5,804.76	-607.14	-280.75	668.90	0.09	0.09	0.74	4.18
	NORMAL	5,949.0	0.44	315.80	5,899.76	-607.31	-281.11	669.20	0.90	-0.09	129.47	154.38
	NORMAL	6,045.0	0.79	322.80	5,995.76	-606.52	-281.76	668.76	0.37	0.36	7.29	15.63
	NORMAL	6,140.0	0.88	299.50	6,090.75	-605.64	-282.79	668.40	0.37	0.09	-24.53	273.00
	NORMAL	6,236.0	0.88	291.06	6,186.74	-605.01	-284.12	668.40	0.13	0.00	-8.79	265.78
	NORMAL	6,332.0	0.35	319.54	6,282.73	-604.52	-285.00	668.33	0.62	-0.55	29.67	163.74
6/29/2012	NORMAL	6,427.0	0.70	103.85	6,377.73	-604.44	-284.63	668.10	1.06	0.37	151.91	156.03
	NORMAL	6,523.0	1.05	133.38	6,473.72	-605.18	-283.42	668.26	0.58	0.36	30.76	67.57
	NORMAL	6,618.0	0.62	134.79	6,568.71	-606.14	-282.42	668.70	0.45	-0.45	1.48	177.97
	NORMAL	6,713.0	0.53	175.22	6,663.70	-606.94	-282.02	669.26	0.43	-0.09	42.56	122.21
	NORMAL	6,809.0	1.23	196.31	6,759.69	-608.38	-282.27	670.66	0.79	0.73	21.97	35.62
	NORMAL	6,904.0	0.70	216.35	6,854.68	-609.82	-282.90	672.24	0.65	-0.56	21.09	157.26
	NORMAL	7,001.0	0.53	298.62	6,951.67	-610.08	-283.65	672.79	0.84	-0.18	84.81	140.13
	NORMAL	7,096.0	1.05	354.21	7,046.66	-609.01	-284.12	672.02	0.91	0.55	58.52	85.81
	NORMAL	7,192.0	0.97	294.40	7,142.65	-607.80	-284.95	671.28	1.05	-0.08	-62.30	236.16

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (%/100ft)	Bulld Rate (%/100ft)	Turn (%/100ft)	TFace (°)
6/29/2012	NORMAL	7,287.0	1.14	242.01	7,237.64	-607.91	-286.52	672.04	0.99	0.18	-55.15	253.11
	NORMAL	7,382.0	1.50	235.34	7,332.61	-609.06	-288.37	673.88	0.41	0.38	-7.02	333.53
	NORMAL	7,478.0	1.58	226.55	7,428.58	-610.68	-290.37	676.20	0.26	0.08	-9.16	284.28
	NORMAL	7,574.0	2.02	231.82	7,524.53	-612.64	-292.66	678.94	0.49	0.46	5.49	23.26
	NORMAL	7,640.0	1.94	235.86	7,590.49	-613.99	-294.50	680.94	0.24	-0.12	6.12	121.83
	NORMAL	7,685.0	1.94	235.86	7,635.47	-614.84	-295.76	682.25	0.00	0.00	0.00	0.00